

In the claims:

For the convenience of the Examiner, all claims being examined, whether or not amended, are presented below.

Please cancel, without prejudice, claim 11.

1. **(Currently amended)** A method of promoting differentiation or survival of a cholinergic neuron, comprising administering a trophic amount of a composition comprising ~~means for binding patched and thereby activating a hedgehog polypeptide which binds to patched and activates hedgehog signaling and a neurotrophic factor comprising NGF, which hedgehog polypeptide is modified, and which modification consists of addition of a lipophilic moiety to the N-terminal amino acid residue of the hedgehog polypeptide, means, wherein the hedgehog polypeptide comprises a sequence of a naturally-occurring, mammalian Sonic hedgehog polypeptide or N-terminal autoproteolytic fragment thereof, and wherein the hedgehog polypeptide means for binding patched and thereby activating hedgehog signaling and the neurotrophic factor means act synergistically to promote differentiation or survival of a cholinergic neuron.~~
2. **(Currently amended)** The method of claim 1, wherein the ~~means for binding patched and thereby activating hedgehog signaling comprises a full length mature hedgehog polypeptide which binds to patched and activates hedgehog signaling comprises an amino acid sequence of SEQ ID NO: 13, SEQ ID NO: 15, or an N-terminal autoproteolytic fragment thereof a bioactive fragment of a hedgehog polypeptide.~~
3. **(Currently amended)** The method of claim 2, wherein the hedgehog polypeptide comprises residue 24-197 of SEQ ID No. 15, ~~residues 28-202 of SEQ ID No. 16 or residues 23-198 of SEQ ID No. 17.~~
4. **(Currently amended)** The method of claim 1 ~~2~~, wherein the ~~means for binding patched and thereby activating hedgehog signaling comprises a naturally occurring hedgehog polypeptide~~

lipophilic moiety comprises a fatty acid moiety or a hydrophobic amino acid or a naturally occurring bioactive fragment thereof.

5. (Withdrawn) The method of claim 1, wherein the hedgehog therapeutic is administered to the subject by administering a viral expression vector for expressing a hedgehog therapeutic.

6. (Previously presented) The method of claim 1, wherein the cholinergic neuron is a cholinergic neuron of the basal forebrain.

7-9. (Cancelled)

10. (Withdrawn) The method of claim 1, wherein the neurotrophic factor is selected from IGF-1, active truncated derivatives of IGF-1, aFGF, bFGF, PDGF, GDNF, NT-3 and NT-4/5.

11-12. (Cancelled)

13. (Withdrawn) The method of claim 1, wherein the neurotrophic factor comprises BDNF or CNTF.

14. (Withdrawn) The method of claim 13, wherein the neurotrophic factor consists essentially of at least one of BDNF or CNTF.

15. (Withdrawn) A kit comprising a hedgehog therapeutic in a pharmaceutically acceptable carrier and a neurotrophic factor in a pharmaceutically acceptable carrier.

16. (Withdrawn) The kit of claim 15, which further comprises a label that indicates the kit can be used in the treatment, amelioration or prevention of neuronal degeneration in a subject.

17. (Withdrawn) The kit of claim 16, in which the label indicates the kit can be used in the treatment, amelioration or prevention of Alzheimer's Disease.

18. (Withdrawn) The kit of claim 16, in which the label indicates the kit can be used in the treatment, amelioration or prevention of either Parkinson's Disease, Huntingdon's Chorea or Amyotrophic Lateral Sclerosis.
19. (Withdrawn) The kit of claim 16, in which the hedgehog therapeutic and the neurotrophic factor form a mixture.
20. (Withdrawn) The kit of claim 16, in which the wherein the hedgehog therapeutic comprises a full length mature hedgehog polypeptide or a bioactive fragment of a hedgehog polypeptide.
21. (Withdrawn) The kit of claim 20, in which the sequence of the hedgehog therapeutic comprises at least the sequence of residues 24-197 of SEQ ID No. 15 or residues 28-202 of SEQ ID No. 16 or residues 28-202 of 23-198 of SEQ ID No. 17.
22. (Withdrawn) The kit of claim 16, in which the hedgehog therapeutic comprises a naturally occurring hedgehog polypeptide or a naturally occurring bioactive fragment thereof.
23. (Withdrawn) The kit of claim 16, in which the hedgehog therapeutic is a viral expression vector for expressing a hedgehog therapeutic.
24. (Withdrawn) The kit of claim 16, in which the neorotrophic factor comprises NGF.
25. (Withdrawn) The kit of claim 24, in which the neurotrophic factor consists essentially of NGF.
26. (Withdrawn) The kit of claim 15, in which the neurotrophic factor comprises BDNF or CNTF.

27. **(Withdrawn)** The kit of claim 15, in which the neurotrophic factor consists essentially of BDNF, CNTF or a mixture thereof.

28. **(Withdrawn)** The kit of claim 15, in which the neurotrophic factor comprises a factor selected from the group consisting of IGF-1, active truncated derivatives thereof, aFGF, bFGF, PDGF, GDNF, NT-3 and NT-4/5.